

# Human/Rhesus macaque/Mouse/Rat/Canine BMP2 Protein



Cat. No. BMP-HE002

Description	
Source	Recombinant Human/Rhesus macaque/Mouse/Rat/Canine BMP2 Protein is expressed from E.coli without tag. It contains Gln283-Arg396 (Human/Rhesus macaque) / Gln279-Arg393 (Mouse/Rat) / Gln282-Arg395 (Canine).
Accession	P12643(Human) / G7N2Y0(Rhesus macaque) / P21274(Mouse) / P49001(Rat) / A0A8I3PXE9(Canine)
Molecular Weight	The protein has a predicted MW of 12.90 kDa same as Bis-Tris PAGE result.
Endotoxin	Less than 0.5EU per µg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE

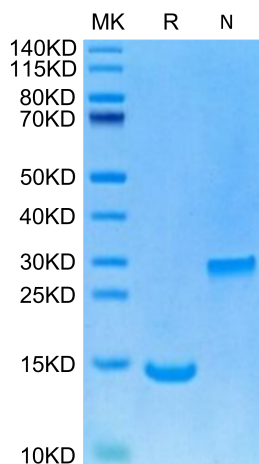
Formulation and Storage	
Formulation	Lyophilized from 0.22µm filtered solution in 100mM Acetic Acid (pH 2.8). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in 100mM Acetic Acid (pH 2.8).
Storage	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

**Background**

Bone morphogenetic protein 2 (BMP2), a member of the transforming growth factor-β (TGF-β) super-family, is one of the main chondrogenic growth factors involved in cartilage regeneration. BMP2 is known to induce chondrogenic differentiation in various types of stem cells in vitro. However, BMP2 also induces osteogenic differentiation and endochondral ossification in mesenchymal stem cells (MSCs).

## Assay Data

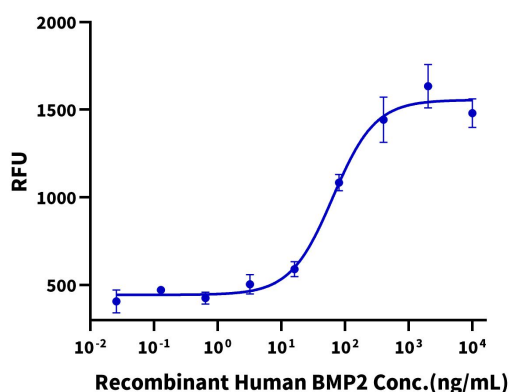
### Bis-Tris PAGE



Human/Rhesus macaque/Mouse/Rat/Canine BMP2 on Bis-Tris PAGE under Non reducing (N) condition and reduced condition. The purity is greater than 95%.

### Cell Based Assay

#### Recombinant Human BMP2 Bioactivity



Measured by its ability to induce Alkaline Phosphatase production by ATDC5 mouse chondrogenic cells. The ED50 for this effect is 40-200 ng/mL (QC Test).